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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,303	02/20/2004	Lutz Rissing	10901/61	7819

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EXAMINER	
JACKSON, TYRONE D	
ART UNIT	PAPER NUMBER
2862	

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/783,303	RISSING, LUTZ	
	Examiner	Art Unit	
	Tyrone Jackson	2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/20/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Seger et al. {US 2003/0218458}.

Seger et al. discloses an inductive sensor comprising at least two circuit boards **22, 25**, receiver circuit traces (single or multi-turn annular magnet **5**) arranged on a first one of the circuit boards (page 5, para 4, lines 49-51), and components of an evaluation electronic arrangement (microprocessor **8**) configured to evaluate signals that originate from the receiver circuit traces (page 4, para 34, lines 16-19) arranged on a second one of the circuit boards (page 5, para 44, lines 56-57). The circuit boards are joined in a sandwich manner with at least one component of the evaluation electronic arrangement arranged between the circuit boards **Fig. 6**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2-4, 6-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seger et al. in view of Schmidt et al. {2004/0095151} and further in view of Wallrafen {6,070,337}.

Regarding claim 2, Seger et al. does not teach having the components of the evaluation circuit arranged on both sides of the second circuit board. Schmidt et al. teaches having the components of the evaluation electronic arrangement arranged on both sides of the circuit board (electric circuits for generating and evaluating the measurement signal on one side of the circuit board and an electrode of the measuring capacitor on the other side, page 3, para 37, lines 20-23). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the inductive sensor taught by Seger et al. with the evaluation electronic arrangement taught by Schmidt et al. so that the electronic components on the side of the board opposite of the recess would be protected from the fields generated by other parts inside the recess (page 2, para 17, lines 50-57).

Regarding claims 3, 4, and 10 Seger et al. teaches the inductive sensor as describe above but does not teach circuit boards that include a recess. Schmidt et al. has a sensor device which has a circuit board including an at least partially circumferential ridge (the housing **14** attached to the circuit board) arranged to at least partially cover a gap between the circuit boards joined in a sandwich manner and includes a recess (partial chamber **22**) configured to accommodate at least one of the components of the evaluation electronic arrangement (page 3, para 37, lines 20-26). It would have been obvious to one of ordinary skill in the art to modify the sensor taught

by Seger et al. to include the ridge taught by Schmidt et al. so that the electronic components disposed in the recess would be shielded against outside electromagnetic radiation (page 4, para 41, lines 10-16).

Regarding claims 6, 8, and 10 Seger et al. does not teach the specific connection method of the circuit boards. Wallrafen teaches that circuit boards (substrate **1**, column 5 lines 38-43) can be connected by soldering, welding or bonding (column 5 lines 52-55). It would have been obvious to one of ordinary skill in the art at the time of the invention to use any of the connection methods taught by Wallrafen to connect the circuit boards taught by Seger et al. because those methods to connect circuit boards are well known in the art.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seger et al. in view of Schmidt et al. {2004/0095151} and further in view of Brown et al. {5,947,691}. Neither Seger et al. nor Schmidt et al. teaches a circuit board having a cylindrical shell side. Brown et al. does teach a circuit board with a cylindrical side (column 3 lines 18-19). It would have been obvious to one of ordinary skill in the art at the time of the invention to make the circuit boards with the attached ridges taught by Seger et al. and Schmidt et al. to be cylindrical as taught by Brown et al. because the circuit boards will be rotating and circular objects rotate with less air resistance than other shaped objects.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Seger et al. in view of Frank {2001/0048313}. Seger et al. does not disclose using a filler material to fill a volume between the circuit boards. Frank discloses a sensor that comprises a filler material (dielectric liquid **16**) arranged to fill a volume enclosed by the circuit board (page 2 para 31 lines 38-41). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a filler material as taught by Frank with the sensor taught by Seger et al. because the filler would indicate movement of the system (page 1 para 4 lines 20-21) which is important when measuring angles.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patents 6734665, 6236199 and 6906527 disclose various types of inductive sensors.

Remarks

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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September 14, 2005